## AMENDMENTS TO THE CLAIMS

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1. (Currently amended) Use of the compounds of the general A method of treating a disease, damage or disorder of the central nervous system associated with a disorder of neurochemical equilibrium of a biogenic amine or other neurotransmitter, comprising administering to a subject in need thereof a compound of formula I

wherein

X means is selected from the group consisting of  $CH_2$  or a heteroatom selected from a group consisting of  $CH_2$ ,  $C_3$ ,  $C_4$ ,  $C_5$ ,  $C_5$ ,  $C_5$ ,  $C_6$ ,  $C_6$ ,  $C_6$ ,  $C_6$ ,  $C_6$ ,  $C_6$ ,  $C_7$ , and  $C_7$ , wherein  $C_8$  is selected from the group consisting of  $C_8$ , or a substituent selected from the group consisting of  $C_8$ ,  $C_9$ -alkyl,  $C_9$ -alkyl,  $C_9$ -alkyl,  $C_9$ -alkylsilyl and  $C_9$ - $C_9$ -alkylsilylalkoxyalkyl;

Y and Z <u>are each</u> independently from each other mean one or more identical or different substituents linked to any available earbon atom selected from the group consisting of hydrogen, halogen,  $C_1$ - $C_4$ -alkyl,  $C_2$ - $C_4$ -alkenyl,  $C_2$ - $C_4$ -alkinyl alkynyl, halo- $C_1$ - $C_4$ -alkyl, hydroxy,  $C_1$ - $C_4$ -alkoxy, trifluoromethoxy,  $C_1$ - $C_4$ -alkanoyl, amino, amino- $C_1$ - $C_4$ -alkyl, N-( $C_1$ - $C_4$ -alkyl)amino, N, N-di( $C_1$ - $C_4$ -alkyl)amino, thiol,  $C_1$ - $C_4$ -alkylthio, sulfonyl,  $C_1$ - $C_4$ -alkylsulfonyl, sulfinyl,  $C_1$ - $C_4$ -alkylsulfonyl, carboxy,  $C_1$ - $C_4$ -alkoxycarbonyl, cyano and nitro;

R<sup>1</sup> means is selected from the group consisting of CHO, CH=CHOCOCH<sub>3</sub>, (CH<sub>2</sub>)<sub>m</sub>OH wherein m represents is an integer from 1 to 3, or and a substituent of the formula II:

$$(CH_2)_m - Q_1 - (CH_2)_m - Q_2 - N R^3$$

wherein

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 $R^{3} \ \text{and} \ R^{4} \ \text{simultaneously or} \ \text{\underline{are each}} \ \text{independently} \ \text{\underline{from each other have the}}$ meaning ofhydrogen, C<sub>1</sub>-C<sub>4</sub>-alkyl or aryl having the meaning of an aromatic ring as well as fused aromatic rings containing one ring with at least 6 carbon atoms or two rings with totally 10 carbon atoms and with alternating double bonds between carbon atoms; or

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R<sup>3</sup> and R<sup>4</sup> taken together with the nitrogen atom to which they are attached form N have the meaning of a heterocycle or heteroaryl group wherein heterocycle relates to five member or six-member fully saturated or partly unsaturated heterocycle group containing at least one hetero atom selected from the group consisting of O, S and N and where said heterocycle can be that is optionally substituted with one or two substituents which are selected from the group consisting of halogen, C1-C4 alkyl, cyano, nitro, hydroxy,  $C_1$ - $C_4$  alkoxy, thiol,  $C_1$ - $C_4$  alkylthio, amino, N- $(C_1$ - $C_4$ ) alkylamino, N, N-di( $C_1$ - $C_4$ -alkyl)amino, sulfonyl, C1-C4 alkylsulfonyl, sulfinyl, and C1-C4 alkylsulfinyl; and wherein heteroaryl relates to aromatic and partially aromatic groups of a monocyclic or bicyclic ring with 4 to 12 carbon atoms and at least one of them being heteroatom selected from the group consisting of O, S and N and where said heteroaryl can be optionally substituted with one or two substituents which are selected from halogen, C1-C4-alkyl, eyano, nitro, hydroxy, C1-C4 alkoxy, thiol,  $C_1$ - $C_4$ -alkylthio, amino, N- $(C_1$ - $C_4$ ) alkylamino, N-N- $di(C_1$ - $C_4$ -alkyl)-amino, sulfonyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, sulfinyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl;

m has the meaning of is an integer from 1 to 3;

n has the meaning of is an integer from 0 to 3;

Q<sub>1</sub> and Q<sub>2</sub> are each independently selected from the group consisting of from each other have the meaning of oxygen, sulfur, or a group:

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## wherein substituents

y<sub>1</sub> and y<sub>2</sub> are each independently selected from the group consisting of from each other have the meaning of hydrogen, halogen, C<sub>1</sub>-C<sub>4</sub>-alkyl optionally substituted with one, two, three or more substituents selected from the group consisting of halogen atom, hydroxy, C<sub>1</sub>-C<sub>4</sub> alkoxy, thiol, C<sub>1</sub>-C<sub>4</sub> alkylthio, amino, N-(C<sub>1</sub>-C<sub>4</sub>) alkylamino, N,N-di(C<sub>1</sub>-C<sub>4</sub>-alkyl)-amino, sulfonyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, sulfinyl and C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl; hydroxy, C<sub>1</sub>-C<sub>4</sub>-alkoxy, C<sub>1</sub>-C<sub>4</sub>-alkanoyl, thiol, C<sub>1</sub>-C<sub>4</sub>-alkylthio, sulfonyl, C<sub>1</sub>-C<sub>4</sub>-alkylsulfonyl, sulfinyl, C<sub>1</sub>-C<sub>4</sub>-alkylsulfinyl, cyano, nitro, or and an monocyclic or bicyclic aryl group having from 6 to 10 carbon atoms and altering double bond and said group can be wherein said ary group is optionally substituted with one or two substituents selected from the group consisting of fluoro, chloro, C<sub>1</sub>-C<sub>4</sub> alkyl, cyano, nitro, hydroxy, C<sub>1</sub>-C<sub>4</sub> alkoxy, thiol, C<sub>1</sub>-C<sub>4</sub> alkylthio, amino, N-(C<sub>1</sub>-C<sub>4</sub>) alkylamino, N,N-di(C<sub>1</sub>-C<sub>4</sub>-alkyl)-amino, sulfonyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, sulfinyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl and ean be is linked to the rest of the molecule by any available earbon atom via a direct bond or via a C<sub>1</sub>-C<sub>4</sub> alkylene group; hydroxy, C<sub>1</sub>-C<sub>4</sub>-alkoxy, C<sub>1</sub>-C<sub>4</sub>-alkoxy, C<sub>1</sub>-C<sub>4</sub>-alkylsulfinyl, eyano, nitro, or

 $y_1$  and  $y_2$  taken together with the carbon atom to which they are attached together form a carbonyl group or an imino group;

 $R^2$  means is selected from the group consisting of hydrogen, an optionally substituted a  $C_1$ - $C_7$ -alkyl group optionally substituted with one or more substituents selected from the group consisting of halogen, hydroxy,  $C_1$ - $C_4$  alkoxy, thiol,  $C_1$ - $C_4$  alkylthio, amino,  $N_1$ - $C_1$ - $C_4$  alkylamino,  $N_1$ - $N_2$ -alkyl-amino, sulfonyl,  $N_2$ - $N_2$ -alkyl-amino, sulfonyl,  $N_1$ - $N_2$ -alkyl-amino, sulfonyl,  $N_2$ - $N_2$ -alkyl-amino, sulfonyl,  $N_1$ - $N_2$ -alkyl-amino, sulfonyl,  $N_2$ - $N_2$ - $N_2$ -alkyl-amino, sulfonyl,  $N_2$ - $N_2$ 

and  $C_1$ - $C_4$  alkylsulfinyl; of an aryl group optionally substituted with one or two substituents selected from the group consisting of fluoro, chloro,  $C_1$ - $C_4$  alkyl, cyano, nitro, hydroxy,  $C_1$ - $C_4$  alkoxy, thiol,  $C_1$ - $C_4$  alkylthio, amino, N- $(C_1$ - $C_4$ ) alkylamino, N-N-di( $C_1$ - $C_4$ -alkyl)-amino, sulfonyl,  $C_1$ - $C_4$  alkylsulfonyl, sulfinyl,  $C_1$ - $C_4$  alkylsulfinyl; wherein an optionally substituted alkyl or aryl have the meaning as defined above,  $C_1$ - $C_7$ -alkanoyl,  $C_1$ - $C_7$ -alkoxycarbonyl,  $C_7$ - $C_{10}$ -arylalkyloxycarbonyl,  $C_7$ - $C_{10}$ -arylalkyl,  $C_3$ - $C_7$ -alkylsilyl,  $C_6$ H<sub>5</sub>CH<sub>2</sub>CH<sub>2</sub> and CH<sub>2</sub>OCH<sub>2</sub>CH<sub>2</sub>Si(CH<sub>3</sub>)<sub>3</sub>;

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and of their <u>a</u> pharmaceutically acceptable <u>salt or solvate thereof</u> <u>salts and solvates</u> for the manufacture of pharmaceutical formulations for the treatment and prevention of diseases, damages and disorders of the central nervous system caused by disorders of neurochemical equilibrium of biogenic amines or other neurotransmitters.

- 2. (Currently amended) Use according to The method of claim 1, wherein the selected biogenic amines are amine is serotonin, norepinephrine and or dopamine.
- 3. (Currently amended) Use according to The method of claim 1, wherein the neurotransmitter is glutamate.
- 4. (Currently amended) Use according to claims 1, 2 or 3 wherein the compounds The method of claim 1, wherein the compound of the general formula I act upon the neurochemical equilibrium by regulating regulates the synthesis, storing, releasing, metabolizing storage, release, metabolism and/or reabsorption, or receptor binding of said biogenic amines amine or neurotransmitters neurotransmitter and binding to their receptors.
- 5. (Currently amended) Use according to The method of claim 4, wherein the eempounds compound of the general formula I show binding affinity binds to a receptor of one or more a biogenic amines amine.
- 6. (Currently amended) Use according to The method of claim 5, wherein the compounds compound of the general formula I show a significant binding affinity binds to a serotonin 5-HT<sub>2A</sub> and or 5-HT<sub>2C</sub> receptors receptor.

7. (Currently amended) Use according to The method of claim 6, wherein the compounds compound of the general formula I show binding affinity to selected binds to a serotonin 5-HT<sub>2A</sub> or 5-HT<sub>2C</sub> receptors receptor with an in a concentration of IC<sub>50</sub><1μM of less than 1μM.

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- 8. (Currently amended) Use according to The method of claim 1, wherein the eompounds compound of the general formula I act as binds to a  $\sigma$ 1 receptor ligands in a concentration of with an IC<sub>50</sub><1  $\mu$ M of less than 1  $\mu$ M by modulating central neurotransmitter system.
- 9. (Currently amended) Use according to claims 1, 6 or 8 The method of claim 1, wherein the c-compounds compound of the general formula I show dual binding affinity bind to a  $\sigma$ 1 receptor and to at least one serotonin receptor selected from 5-HT<sub>2A</sub> and 5-HT<sub>2C</sub>.
- 10. (Currently amended) Use according to The method of claim 1, wherein the diseases and disorders disease or disorder of the central nervous system are is selected from the group consisting of anxiety, depression and modest depression, bipolar disorders, sleeping disorders, sexual disorders, psychosis, borderline psychosis, schizophrenia, migraine, personality disorders, and obsessive-compulsive disorders, social phobia, or panic attacks, organic mental disorders in children, aggression, memory disorders, and personality disorders in elderly people, addiction, obesity, bulimia and similar other eating disorders, snoring, and premenstrual troubles.
- 11. (Currently amended) Use according to The method of claim 1, wherein the damages of damage to the central nervous system are is caused by trauma, brain stroke, neurodegenerative diseases, cardiovascular disorders such as high blood pressure, thrombosis, infarct as well as by or gastrointestinal disorders.
- 12. (Currently amended) Use according to The method of claim 1 wherein X represents is O, S, or NR<sup>a</sup>, wherein R<sup>a</sup> is hydrogen or a substituent selected from the group consisting of C<sub>1</sub>-C<sub>3</sub>-alkyl, C<sub>1</sub>-C<sub>3</sub>-alkanoyl, C<sub>7</sub>-C<sub>10</sub>-aroyl, and C<sub>7</sub>-C<sub>10</sub>-arylalkyl.

13. (Currently amended) Use according to The method of elaims 1 or 12 claim 1, wherein Y and Z are each independently from each other mean one or more identical or different substituents linked to any available earbon atom-selected from the group consisting of hydrogen, fluorine, chlorine, bromine, C<sub>1</sub>-C<sub>4</sub>-alkyl, halo-C<sub>1</sub>-C<sub>4</sub>-alkyl, hydroxy, C<sub>1</sub>-C<sub>4</sub>-alkoxy, trifluoromethoxy, C<sub>1</sub>-C<sub>4</sub>-alkanoyl, amino, amino-C<sub>1</sub>-C<sub>4</sub>-alkyl, N-(C<sub>1</sub>-C<sub>4</sub>-alkyl)amino, N,N-di(C<sub>1</sub>-C<sub>4</sub>-alkyl)amino, thiol, C<sub>1</sub>-C<sub>4</sub>-alkylthio, cyano and nitro.

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14. (Currently amended) Use according to claims 1, 12 or 13 The method of claim 1, wherein R<sup>1</sup> has the meaning is selected from the group consisting of CHO, CH=CHOCOCH<sub>3</sub>, (CH<sub>2</sub>)<sub>m</sub>OH wherein m represents is an integer from 1 to 3; or and a substituent represented with of the formula II:

$$(CH_2)_m - Q_1 - (CH_2)_m - Q_2 - N_R^{3}$$

II

wherein

 $R^3$  and  $R^4$  are each independently simultaneously or independently from each other represent hydrogen,  $C_1$ - $C_4$ -alkyl, or aryl werein aryl has the meaning as defined above or

R<sup>3</sup> and R<sup>4</sup> taken together with the nitrogen atom to which they are attached form a together with N have the meaning of heterocycle or heteroaryl group selected from the group consisting of morpholine-4-yl, piperidine-1-yl, pyrrolidine-1-yl, imidazole-1-yl and piperazine-1-yl;

m has the meaning of is an integer from 1 to 3;

n has the meaning of is an integer from 0 to 3; and

 $Q_1$  and  $Q_2$  are each independently from each other have the meaning of oxygen or  $CH_2$  group.

15. (Currently amended) Use according to The method of claim 1, wherein the compounds compound of the general formula I, pharmaceutically acceptable salts and solvates thereof are is selected from the group consisting of:

1-methyl-1H-8-oxa-1,3-diaza-dibenzo[e,h]azulene-2-carbaldehyde;

1-methyl-1H-8-thia-1,3-diaza-dibenzo[e,h]azulene-2-carbaldehyde;

1-phenethyl-1H-8-oxa-1,3-diaza-dibenzo[e,h]azulene-2-carbaldehyde;

1-phenethyl-1H-8-thia-1, 3-diaza-dibenzo [e,h] azulene-2-carbaldehyde;

1-(2-trimethylsilyl-ethoxymethyl)-1H-8-oxa-1,3-diaza-dibenzo[e,h]azulene-2-

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carbaldehyde;

1-(2-trimethylsilyl-ethoxymethyl)-1H-8-thia-1,3-diaza-dibenzo[e,h]azulene-2-carbaldehyde;

5-chloro-1-(2-trimethylsilyl-ethoxymethyl)-1H-8-oxa-1,3-diaza-dibenzo[e,h]azulene-2-carbaldehyde;

11-chloro-1-(2-trimethylsilyl-ethoxymethyl)-1H-8-oxa-1,3-diaza-dibenzo[e,h]azulene-2-carbaldehyde;

 $\label{lem:condition} 5-chloro-1-(2-trimethylsilyl-ethoxymethyl)-1H-8-thia-1,3-diazadibenzo[e,h] azulene-2-carbaldehyde;$ 

 $11\hbox{-chloro-1-} (2\hbox{-trimethyl silyl-ethoxymethyl})\hbox{-}1H-8\hbox{-thia-1,3-diaza-dibenzo[e,h]} azulene-2\hbox{-carbaldehyde};$ 

3-(1-phenethyl-1H-8-thia-1,3-diaza-dibenzo[e,h]azulen-2-yl)-acrylic acid methyl ester;

(1-methyl-1H-8-oxa-1,3-diaza-dibenzo[e,h]azulen-2-yl)-methanol;

(1-methyl-1H-8-thia-1,3-diaza-dibenzo[e,h] azulen-2-yl)-methanol;

(1-phenethyl-1H-8-oxa-1,3-diaza-dibenzo[e,h]azulen-2-yl)-methanol;

(1-phenethyl-1H-8-thia-1,3-diaza-dibenzo[e,h]azulen-2-yl)-methanol;

[1-(2-trimethylsilyl-ethoxymethyl)-1H-8-oxa-1,3-diaza-dibenzo[e,h]azulen-2-yl]-

methanol;

methanol;

[1-(2-trimethylsilyl-ethoxymethyl)-1H-8-thia-1,3-diaza-dibenzo[e,h]azulen-2-yl]-

propyl]-amine;

First Preliminary Amendment [5-chloro-1-(2-trimethylsilyl-ethoxymethyl)-1H-8-oxa-1,3-diaza-dibenzo[e,h]azulen-2-yl]-methanol; [11-chloro-1-(2-trimethylsilyl-ethoxymethyl)-1H-8-oxa-1,3-diazadibenzo[e,h]azulen-2-yl]-methanol; [5-chloro-1-(2-trimethylsilyl-ethoxymethyl)-1H-8-thia-1,3-diaza-dibenzo[e,h]azulen-2-yl]-methanol; [11-chloro-1-(2-trimethylsilyl-ethoxymethyl)-1H-8-thia-1,3-diazadibenzo[e,h]azulen-2-yl]-methanol; 3-(1-phenethyl-1H-8-thia-1,3-diaza-dibenzo[e,h]azulen-2-yl)-propane-1-ol; dimethyl-[2-(1-methyl-1H-8-oxa-1,3-diaza-dibenzo[e,h]azulen-2-ylmethoxy)-ethyl]amine; dimethyl-[3-(1-methyl-1H-8-oxa-1,3-diaza-dibenzo[e,h]azulen-2-ylmethoxy)propyl]-amine; dimethyl-[2-(1-methyl-1H-8-thia-1,3-diaza-dibenzo[e,h]azulen-2-ylmethoxy)-ethyl]amine; dimethyl-[3-(1-methyl-1H-8-thia-1,3-diaza-dibenzo[e,h]azulen-2-ylmethoxy)propyl]-amine; dimethyl-[2-(1-phenethyl-1H-8-oxa-1,3-diaza-dibenzo[e,h]azulen-2-ylmethoxy)ethyl]-amine; dimethyl-[3-(1-phenethyl-1H-8-oxa-1,3-diaza-dibenzo[e,h]azulen-2-ylmethoxy)propyl]-amine; dimethyl-[2-(1-phenethyl-1H-8-thia-1,3-diaza-dibenzo[e,h]azulen-2-ylmethoxy)ethyl]-amine; dimethyl-[3-(1-phenethyl-1H-8-thia-1,3-diaza-dibenzo[e,h]azulen-2-ylmethoxy)-

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 $dimethyl-\{2-[1-(2-trimethylsilyl-ethoxymethyl)-1H-8-oxa-1,3-diazadibenzo[e,h]azulen-2-ylmethoxy]-ethyl\}-amine;$ 

dimethyl-[2-(1H-8-oxa-1,3-diaza-dibenzo[e,h]azulen-2-ylmethoxy)-ethyl]-amine;

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              dimethyl-{3-[1-(2-trimethylsilyl-ethoxymethyl)-1H-8-oxa-1,3-diaza-
dibenzo[e,h]azulen-ylmethoxy]-propyl}-amine;
              dimethyl-[3-(1H-8-oxa-1,3-diaza-dibenzo[e,h]azulen-2-ylmethoxy)-propyl]-amine;
              3-[1-(2-trimethylsilyl-ethoxymethyl)-1H-8-oxa-1,3-diaza-dibenzo[e,h]azulen-2-
ylmethoxy]-propylamine;
              3-(1H-8-oxa-1,3-diaza-dibenzo[e,h]azulen-2-ylmethoxy)-propylamine;
              dimethyl-{2-[1-(2-trimethylsilyl-ethoxymethyl)-1H-8-thia-1,3-diaza-
dibenzo[e,h]azulen-2-ylmethoxy]-ethyl}-amine;
              dimethyl-[2-(1H-8-thia-1,3-diaza-dibenzo[e,h]azulen-2-ylmethoxy)-ethyl]-amine;
              dimethyl-{3-[1-(2-trimethylsilyl-ethoxymethyl)-1H-8-thia-1,3-diaza-
dibenzo[e,h]azulen-2-ylmethoxy]-propyl}-amine;
              dimethyl-[3-(1H-8-thia-1,3-diaza-dibenzo[e,h]azulen-2-ylmethoxy)-propyl]-amine;
              {3-[5-chloro-1-(2-trimethylsilyl-ethoxymethyl)-1H-8-oxa-1,3-diaza-
dibenzo[e,h]azulen-2-ylmethoxy]-propyl}-dimethyl-amine;
              [3-(5-chloro-1H-8-oxa-1,3-diaza-dibenzo[e,h]azulen-2-ylmethoxy)-propyl]-
dimethyl-amine;
              3-[5-chloro-1-(2-trimethylsilyl-ethoxymethyl)-1H-8-oxa-1,3-diaza-
dibenzo[e,h]azulen-2-ylmethoxy]-propylamine;
              3-(5-chloro-1H-8-oxa-1,3-diaza-dibenzo[e,h]azulen-2-ylmethoxy)-propylamine;
              {2-[11-chloro-1-(2-trimethylsilyl-ethoxymethyl)-1H-8-oxa-1,3-diaza-
dibenzo[e,h]azulen-2-ylmethoxy]-ethyl}-dimethyl-amine;
              [2-(11-chloro-1H-8-oxa-1,3-diaza-dibenzo[e,h]azulen-2-ylmethoxy)-ethyl]-dimethyl-
amine;
              {3-[11-chloro-1-(2-trimethylsilyl-ethoxymethyl)-1H-8-oxa-1,3-diaza-
dibenzo[e,h]azulen-2-ylmethoxy]-propyl}-dimethyl-amine;
              [3-(11-chloro-1H-8-oxa-1,3-diaza-dibenzo[e,h]azulen-2-ylmethoxy)-propyl]-
dimethyl-amine;
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{2-[5-chloro-1-(2-trimethylsilyl-ethoxymethyl)-1H-8-thia-1,3-diazadibenzo[e,h]azulen-2-ylmethoxy]-ethyl}-dimethyl-amine;

 $\label{eq:continuous} [2\mbox{-}(5\mbox{-}chloro-1H-8\mbox{-}thia-1,3\mbox{-}diaza-dibenzo[e,h]azulen-2\mbox{-}ylmethoxy)-ethyl]-dimethylamine;$ 

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 ${3-[5-chloro-1-(2-trimethylsilyl-ethoxymethyl)-1H-8-thia-1,3-diazadibenzo[e,h]azulen-2-ylmethoxy]-propyl}-dimethyl-amine;}$ 

 $[3\hbox{-}(5\hbox{-}chloro\hbox{-}1H\hbox{-}8\hbox{-}thia\hbox{-}1,3\hbox{-}diaza\hbox{-}dibenzo[e,h]azulen\hbox{-}2\hbox{-}ylmethoxy)\hbox{-}propyl]\hbox{-}dimethyl\hbox{-}amine;} -and$ 

 $\label{lem:condition} dimethyl-\{3-[3-(1-phenethyl-1H-8-thia-1,3-diaza-dibenzo[e,h]azulen-2-yl)-propoxy]-propyl\}-amine; \\ and$ 

a pharmaceutically acceptable salt or solvate thereof.